

PROCEEDINGS OF THE
INDIAN ACADEMY OF SCIENCES
(Mathematical Sciences)

VOLUME 90, JANUARY-DECEMBER 1981

INDEX

THE INDIAN ACADEMY OF SCIENCES
BANGALORE 560080

SUBJECT INDEX (Mathematical Sciences)

- Abelian group
 - Polarisations on an abelian variety 125
- Balasubramanian's theorem
 - On the mean square value of Hurwitz zeta function 195
- Bifurcation diagrams
 - On some problems in singularity theory 1
- Boral summability
 - On the relation of generalized Valiron summability to Cesàro summability 181
- Boundary layers
 - Analyse asymptotique des equations de Transport dans le cas dévolution 219
- Bounded argument rotation bounded boundary rotation
 - On a generalization of the class of functions with bounded Mocanu variation 213
- Bundles
 - Yang-Mills and bundles over algebraic curves 11
- Carton subgroup
 - A submersion principle and its applications 95
- Chern-Gauss-Bonnet theorem
 - Curvature and the heat equation for the de Rham complex 47
- Clifford bundles
 - Orthogonal and spin bundles over hyper-elliptic curves 151
- Closure properties
 - EOL and ETOL array languages 167
- Cohomological computations
 - Yang-Mills and bundles over algebraic curves 11
- Complex singularity
 - On some problems in singularity theory 1
- Continuous kernels
 - On operators of trace class in $L^2(X, \mu)$ 29
- Convolution
 - On a generalization of the class of functions with bounded Mocanu variation 213
- Correctors
 - Homogenization of eigenvalue problems in perforated domains 239
- Curvature
 - Curvature and the heat equation for the de Rham complex 47
- de Rham complex
 - Curvature and the heat equation for de Rham complex 47
- Diffeomorphism
 - Deformations of metrics and associated harmonic maps 33
- Diffusion approximation
 - Analyse asymptotique des équations de Transport dans le cas d'évolution 219
- Dirichlet eigenvalue problem
 - Homogenization of eigenvalue problem in perforated domains 239
- Dirichlet problem
 - Deformations of metrics and associated harmonic maps 33
- Dirichlet series
 - Poisson formulae of Hecke type 129
- Discrete uniform subgroups
 - Geometric construction of cohomology for arithmetic groups I 103
- Distribution kernel
 - On operators of trace class in $L^2(X, \mu)$ 29
- Eigenvalues
 - Homogenization of eigenvalue problems in perforated domains 239
- Eigenvectors
 - Homogenization of eigenvalue problems in perforated domains 239
- Elliptic semilinear equations
 - Application of Newton's method to a homogenization problem 229
- EOL array systems
 - EOL and ETOL array languages 167
- ETOL array systems
 - EOL and ETOL array languages 167
- Fredholm alternative
 - Analyse asymptotique des équations de Transport dans le cas d'évolution 219

- Galois cocycle
 Geometric construction of cohomology for arithmetic groups I 103
- Generalized Valiron summability
 On the relation of generalized Valiron summability to Cesàro summability 181
- Geodesics
 Deformations of metrics and associated harmonic maps 33
- Harder-Narasimhan method
 Yang-Mills and bundles over algebraic curves 11
- Harmonic forms
 Vanishing theorems for square-integrable harmonic forms 21
- Harmonic maps
 Deformations of metrics and associated harmonic maps 33
- Heat equation
 Curvature and the heat equation for the de Rham complex 47
- Hierarchy
 EOL and ETOL array languages 167
- Hilbert-Schmidt operators
 On operators of trace class $L^2(X, \mu)$ 29
- Hill's operator
 Units of Hill curves 81
- Homogenization
 Application of Newton's method to a homogenization problem 229
- Homogenization
 Homogenization of eigenvalue problems in perforated domains 239
- Homomorphism
 Polarisations on an abelian variety 125
- Hybrid analogue for L-series
 On the mean square value of Hurwitz zeta function 195
- Hyperelliptic curves
 Orthogonal and spin bundles over hyperelliptic curves 151
- Hypergeometric function
 On a generalization of the class of functions with bounded Mocanu variation 213
- Integral operators
 On operators of trace class in $L^2(X, \mu)$ 29
- Invariance theory
 Curvature and the heat equation for the de Rham complex 47
- Killing degeneracy
 Deformations of metrics and associated harmonic maps 33
- Laplace operator
 Units of Hill curves 81
- Lie groups
 Geometric construction of cohomology for arithmetic groups I 103
- L-series
 A note on the mean value of L-series 273
- Matsushima's theorem
 Vanishing theorems for square-integrable harmonic forms 21
- Maxima singularities
 On some problems in singularity theory 1
- Mean value
 A note on the mean value of L-series 273
- Mellian transforms
 Poisson formulae of Hecke type 129
- Mocanu variation
 On a generalization of the class of functions with bounded Mocanu variation 213
- Modality
 On some problems in singularity theory 1
- Morse index
 Yang-Mills and bundles over algebraic curves 11
- Neron-Severi group
 Polarisations on an abelian variety 125
- Neumann eigenvalue problem
 Homogenization of eigenvalue problems in perforated domains 239
- Newton's method
 Application of Newton's method to a homogenization problem 229
- Non-negative Jacobian
 Deformations of metrics and associated harmonic maps 33
- Non-zero cohomology
 Geometric construction of cohomology for arithmetic groups I 103
- Normal form
 EOL and ETOL array languages 167
- Orthogonal bundles
 Orthogonal and spin bundles over hyperelliptic curves 151
- Orthogonal decomposition
 Geometric construction of cohomology for arithmetic groups I 103
- Patodi's cancellation lemma
 Curvature and the heat equation for the de Rham complex 47
- Poisson formulae
 Poisson formulae of Hecke type 129
- Polarisation
 Polarisations on an abelian variety 125
- Primitive characters
 A note on the mean value of L-series 273

- Rajagopal's theorem
 On the relation of generalized Valiron summability to Cesàro summability 181
- Ramanujan's function
 Poisson formulae of Hecke type 129
- Real singularity
 On some problems in singularity theory 1
- Riemannian metrics
 Deformations of metrics and associated harmonic maps 33
- Riemannian manifold
 Vanishing theorems for square-integrable harmonic forms 21
- Riemannian manifold
 Curvature and the heat equation for the de Rham complex 47
- Riemann surfaces
 Yang-Mills and bundles over algebraic curves 11
- Rosati involution
 Polarizations on an abelian variety 125
- Schwartz function
 Poisson formulae of Hecke type 129
- Schwartz kernel theorem
 On operators of trace class in $L^2(X, \mu)$ 29
- Singularity theory
 On some problems in singularity theory 1
- Spin bundles
 Orthogonal and spin bundles over hyper-elliptic curves 151
- Spin structure
 Orthogonal and spin bundles over hyper-elliptic curves 151
- Stekloff eigenvalue problem
 Homogenization of eigenvalue problems in perforated domains 239
- Submersion principle
 A submersion principle and its applications 95
- Synchronized form
 EOL and ETOL array languages 167
- Toda units
 Units of Hill curves 81
- Trace class operators
 On operators of trace class in $L^2(X, \mu)$ 29
- Trace formula
 Units of Hill curves 81
- Transport equations
 Analyse asymptotique des équations de Transport dans le cas d'évolution 219
- Unimodular group
 A submersion principle and its applications 95
- Vanishing theorems
 Vanishing theorems for square-integrable harmonic forms 21
- Yang-Mills equations
 Yang-Mills and bundles over algebraic curves 11

AUTHOR INDEX (Mathematical Sciences)

- Arnold V
 On some problems in singularity theory 1
- Atiyah M F
 Yang-Mills and bundles over algebraic curves 11
- Bott R
see Atiyah M F 11
- Dodziuk Jozef
 Vanishing theorems for square-integrable harmonic forms 21
- Duistermaat J J
 On operators of trace class in $L^2(X, \mu)$ 29
- Eells J
 Deformations of metrics and associated harmonic maps 23
- Gilkey Peter B
 Curvature and the heat equation for the de Rham complex 47
- Harish-Chandra
 A submersion principle and its applications 95
- Kamala Krithivasan
see Nalinakshi Nirmal 167
- Kesavan S
 Application of Newton's method to a homogenization problem 229
- Krishnan V K
 On the relation of generalized Valiron summability to Cesàro summability 181
- Lemaire L
see Eells J 33

- McKean H P
Units of Hill curves 81
- Millson John J
Geometric construction of cohomology for arithmetic groups I 103
- Nalinakshi Nirmal
EOL and ETOL array languages 167
- Narasimhan M S
Polarisations on an abelian variety 125
- Narlikar M J
On the mean square value of Hurwitz zeta function 195
- Nori M V
see Narasimhan M S 125
- Raghavan S
Poisson formulae of Hecke type 129
- Raghunathan M S
see Millson John J 103
- Ramanan S
Orthogonal and spin bundles over hyper-elliptic curves 151
- Rane V V
A note on the mean value of L -series 273
- Rangachari S S
see Raghavan S 129
- Santos Rafael F
Analyse asymptotique des équations de Transport dans le cas d'évolution 219
- Thangamani J
On a generalization of the class of functions with bounded Mocanu variation 213
- Vanninathan M
Homogenization of eigenvalue problems in perforated domains 239

Proceedings of the Indian Academy of Sciences

Vol. 90, January - December 1981

CONTENTS (Mathematical Sciences)

On some problems in singularity theory	<i>V Arnold</i>	1
Yang-Mills and bundles over algebraic curves	<i>M F Atiyah and R Bott</i>	11
Vanishing theorems for square-integrable harmonic forms	<i>Jozef Dodziuk</i>	21
On operators of trace class in $L^2(X, \mu)$	<i>J J Duistermaat</i>	29
Deformations of metrics and associated harmonic maps	<i>J Eells and L Lemaire</i>	33
Curvature and the heat equation for the de Rham complex	<i>Peter B Gilkey</i>	47
Units of Hill curves	<i>H P McKean</i>	81
A submersion principle and its applications	<i>Harish Chandra</i>	95
Geometric construction of cohomology for arithmetic groups I	<i>John J Millson and M S Raghunathan</i>	103
Polarisations on an abelian variety	<i>M S Narasimhan and M V Nori</i>	125
Poisson formulae of Hecke type	<i>S Raghavan and S S Rangachari</i>	129
Orthogonal and spin bundles over hyperelliptic curves	<i>S Ramanan</i>	151
EOL and ETOL array languages	<i>Nalinakshi Nirmal and Kamala Krithivasan</i>	167
On the relation of generalized Valiron summability to Cesàro summability	<i>V K Krishnan</i>	181
On the mean square value of Hurwitz zeta function	<i>M J Narlikar</i>	195
On a generalization of the class of functions with bounded Mocanu variation	<i>J Thangamani</i>	213
Analyse asymptotique des équations de Transport dans le cas d'évolution	<i>Rafael F Santos</i>	219
Application of Newton's method to a homogenization problem	<i>S Kesavan</i>	229
Homogenization of eigenvalue problems in perforated domains	<i>M Vanninathan</i>	239
A note on the mean value of L-series	<i>V V Rane</i>	273

